REMARKS

In view of the following remarks responsive to the Office Action of November 29, 2005, Applicants respectfully request favorable reconsideration of this application.

The Office rejected all pending claims, claims 1-23, under 35 U.S.C §103(a) as unpatentable over Blackmer in view of Kuhn.

The Present Invention

The present invention is a method and apparatus for teaching a speech recognition system or a text-to-speech system the proper pronunciations of letters or letter groups within particular character strings, such as words or names (hereinafter strings). Specifically, the particular pronunciation of a letter or letter group (hereinafter letter group) in any given character string can depend on many different factors, including the particular language, the particular word within which it appears, the particular usage of that word (e.g., noun or verb), the particular speaker, etc. The present invention involves a scheme by which a user can enter a string using a graphical user interface (hereinafter GUI) and then teach the system (e.g., the software) how to pronounce various letter groups in the string. More particularly, the user selects a particular letter group and the software GUI presents the user with a plurality of words containing that letter group. The user can then select the word in the list in which the pronunciation of that letter group most closely matches the correct or desired pronunciation of that letter group in the string. The system also provides similar GUI for allowing the user to change syllable breaks and/or accent within the string.

The Blackmer Reference

Blackmer does not have anything to do with teaching software the pronunciation of letter groups or words. Rather, Blackmer pertains to <u>software</u> for teaching <u>a person</u>

the correct pronunciation of words in a given language. <u>The entire disclosure of</u>
<u>Blackmer is based on the premise that the computer already knows how to pronounce</u>
<u>the words</u>. Blackmer discloses a lesson plan and method for teaching <u>people</u> correct
pronunciation, not for teaching the <u>software</u> correct pronunciation. In short, it is
directed to an entirely different issue than the present invention and is, therefore,
essentially irrelevant to the present invention.

The Kuhn Reference

Kuhn discloses a computer program for teaching software the pronunciation of
letter groups or words. However, the process is completely automated and involves no
human interaction. Kuhn discloses a series of two decision trees that attempt to
probabilistically determine the correct pronunciation of words in a language based on
the pronunciation rules of that language. The present invention involves no probability
analysis, but instead permits a human to train the computer by selecting pronunciations
as dictated by existing words from which the user selects. Other than the fact that Kuhn
pertains to teaching a computer pronunciations of words, it does not appear to contain
any teachings relevant to the present invention.

There is no human interaction, which is a cornerstone of the present invention.
There are no lists of words having different possible pronunciations of a character
string.

The Independent Claims Distinguish Over Blackmer

As a preliminary matter, Applicants do not understand the explanation of the
rejection of the independent claims 1, 15 and 23. Specifically, the Office Action states
that the independent claims are rejected as unpatentable over Blackmer in view of
Kuhn. However, what follows is a statement that "<u>Blackmer et al (5393236)</u> teaches ...
[followed by a complete quotation of claim 1 with parenthetical citations to portions of

Blackmer's specification]". Thus, this would seem to be an explanation of an anticipation rejection based on Blackmer alone, and not an obviousness rejection based partially on Kuhn also. Then, the next two sentences of the Office Action state that Blackmer "does not explicitly teach training the recognition system for pronunciations, however, Kuhn et al (6016471) teaches incorporating the pronunciation aspect into existing systems (abstract, col. 5, lines 10-31). Therefore, it would have been obvious ... to modify the teachings of Blackmer et al (5393236) with training an existing recognition system because it would advantageously provide useful feedback to the user with respect to pronunciation accuracy (Kuhn et al (6016471), col. 5, lines 25-32)".

Thus it is unclear what reference the Office is relying upon for each element of claim 1.

In any event, Applicant believes it can address the rejections in a reasonable fashion, as both references are quite irrelevant, in any event.

The present invention is a method and apparatus for teaching a computer how to pronounce words. The Office has explicitly admitted that its primary reference, Blackmer, "does not explicitly teach training the recognition system for pronunciations". In fact, it is not simply that Blackmer does not explicitly teach training the recognition system for pronunciations. Blackmer has absolutely nothing whatsoever to do with training the recognition system for pronunciations. Blackmer concerns teaching humans the correct pronunciation of words. Blackmer starts from the premise that the computer system already knows the correct pronunciation of the words. Blackmer has no disclosure as to how the computer system learned the correct pronunciations.

The Office's reliance on Blackmer is entirely misplaced. It is an irrelevant reference. The Office's reliance of Blackmer is akin to rejecting a claim reciting a certain construction of a tennis racquet based on a reference that teaches someone how to play tennis. Particularly, certainly, a tennis racquet must be constructed before one can play tennis with it. However, a lesson as to how to play tennis discloses

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nothing about how to construct the tennis racquet. Likewise, a teaching of how to teach

a human how to pronounce words using a computer system (i.e., Blackmer) discloses

absolutely nothing about how to develop the computer system that knows how to

pronounce those words in the first place (the present invention).

In the response to the previous Office Action, in which the Office rejected the

claims as anticipated by Blackmer, Applicant expended considerable effort showing the

Office how Blackmer failed to teach essentially any limitation of claim 1. However, in

the present Office Action, the Office asserted that "Applicant's arguments with respect

to the claims have been considered but are moot in view of the new ground(s) of

rejection".

Nothing could be further from the truth. The present rejection is a *verbatim* copy

of the previous rejection with the two above-quoted sentences concerning Kuhn tacked

on the end. Thus, Applicant's previous arguments clearly are <u>not</u> moot since the Office

in the present Office Action has asserted that Blackmer teaches exactly the same

things that the Office asserted Blackmer taught in the previous Office Action.

Accordingly, Applicant's previous arguments showing how Blackmer, in fact, does not

teach any of the limitations of claim 1 are reproduced below for reference (with

corrections for typographical errors).

> *The Office's explanations of the correspondence of the elements of the claims of*
>
> *the present application to the disclosure of Blackmer are entirely erroneous. For*
>
> *instance, with respect to the step in claim 1 of "allowing the user to select one or more*
>
> *characters in the string and retrieve from a database a plurality of syllables, words or*
>
> *parts of words representing different possible pronunciations of the selected one or more*
>
> *characters and displaying the retrieved samples", the Office refers to column 19, lines 1-*
>
> *34 of Blackmer. However, column 19, lines 1-34, describe how to navigate through*
>
> *various GUIs of a lesson on the difference in pronunciation between the letters "p" and*

"b". It mentions that icons 644 and 646 lead to lessons on pronouncing "p" and "b", respectively. However, it does not describe the lessons. Even looking further down column 19, it merely discloses that the computer shows a plurality of words to the trainee that will help him or her understand the correct pronunciation of those letters (see Fig. 6C) and then plays a recording of those words being pronounced. There is no mention in Blackmer of different possible pronunciations of the letters "p" or "b". In fact, the point of Blackmer is that "p" is pronounced the same way in all of the displayed words with that letter and "b" is pronounced the same in all of the displayed words with that letter. There is no "retriev[ing] a plurality of syllables ... representing different possible pronunciations." Furthermore, Blackmer does not disclose "storing first pronunciation data comprising the string of characters with the selected one or more characters being assigned the pronunciation associated with the sample selected by the user".

As noted above, the pronunciation of the words shown in the GUI represented in Fig. 6C of Blackmer is given by the software to the user, not by the user to the software. Independent claim 15 includes essentially identical limitations. Accordingly, these claims and all claims that depend therefrom, i.e., claims 1-22, clearly patentably distinguish over Blackmer.

Although not mentioned in the previous response, independent claim 23 also distinguishes over the prior art of record for the same reasons discussed in connection with claim 1. Specifically, Blackmer does not teach "an input/output system for allowing a user to select one of the first character strings from the dictionary database, to select one or more characters from the selected string, and to select one of the words in the pronunciation database" or "a programmable controller for generating pronunciation data comprising the selected first character string with the selected one or more characters being assigned the pronunciation associated with the word selected from the pronunciation database by the user".

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Turning to Kuhn, this reference actually bears some relevance to the present invention in the sense that it, like the present invention, pertains to teaching a computer how to pronounce words. However, this is where the similarities end. Furthermore, Kuhn is essentially irrelevant to Blackmer and there is absolutely no suggestion to combine Kuhn with Blackmer in any way that could possibly result in the present invention. As previously alluded to, Kuhn could be used as the system for training the computer system of Blackmer the correct pronunciation of the words. However, this is irrelevant to the present invention, which has nothing to do with teaching humans how to pronounce words. The combination of Kuhn with Blackmer that would be necessary to result in the present invention is not suggested in the art. The Office's only explanation of the combination is that Kuhn "teaches incorporating the pronunciation aspect into existing systems" and that it would have been obvious to modify Blackmer with "training existing recognition stem because it would advantageously provide useful feedback to the user with respect to pronunciation accuracy".

Applicant certainly does not dispute that it would be wise to train the computer system of Blackmer how to pronounce the words before that computer system is used to train a human how to pronounce those words. Applicant also does not dispute that Kuhn discloses a system for training a computer the pronunciation of words.

Furthermore, even if Applicant were to assume for purposes of argument that the proposed combination was suggested in the art, the combination does not result in anything that remotely resembles the present invention as claimed. The problem with the combination is that Blackmer is utterly irrelevant since it teaches nothing about how to teach the computer system the correct pronunciations of the words. Thus, the question is, what does Kuhn disclose regarding how to teach a computer recognition system the pronunciation of words. The answer is that it teaches a certain technique, but that technique bears essentially no resemblance to the present invention.

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The Office actually has not asserted otherwise. The Office cites Kuhn solely for its generic teaching of "incorporating the pronunciation aspect into existing systems" and/or "training an existing recognition system" (Office Action). Therefore, there is no need to further elaborate on this issue. Besides, Applicant has already described the teachings of Kuhn above and noted that Kuhn does not involve any human interaction. Hence, Kuhn cannot possibly teach any of the claim elements, all of which at least refer to some human interaction.

The Dependent Claims Add Further Distinguishing Limitations

The rejections of the dependent claims appear to be *verbatim* copies of the rejections contained in the previous Office Action. Accordingly, the Office's assertion that "Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection" (and the resultant failure to address them) was improper.

Accordingly, Applicant's previous arguments showing how the dependent claims even further distinguish over Blackmer is reproduced below.

The dependent claims contain even further distinguishing features. For instance, claim 2 adds "generating a pronunciation of the letter group using the pronunciation represented by the sample selected by the user as a pronunciation for the selected one or more characters, and audibly outputting the generated pronunciation". Blackmer obviously cannot meet this limitation since there is no pronunciation that is "selected by the user".

Claim 4 adds the step of "allowing the user to select a second of the displayed samples and storing second pronunciation data comprising the string of characters with the selected one or more characters being assigned a pronunciation represented by the second sample selected by the user". This is a similar step to the above-discussed step in

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claim 1. Claim 5 depends from claim 4 and adds the step of, during a text-to-speech process of generating audible output of a text file containing a string of characters, selecting one of the first or second pronunciation data. Obviously, since Blackmer does not discuss how the computer selects pronunciation of the words, it cannot possibly disclose this feature.

Claim 6 depends from claim 5 and further adds the limitation of "associating the first and second pronunciation data with first and second objects, respectively, and selecting one of the first and second objects, and during the step of selecting one of the first and second pronunciation data comprises selecting the pronunciation data associated with the selected object". This claim builds on the feature recited in claims 4 and 5 where a letter group in a single word may have a different pronunciation depending on context (i.e., the object). Blackmer does not disclose anything like this since it does not disclose anything about how the software determines the pronunciation.

Claims 7 and 8 continue to build on this concept. Claim 7 recites that the particular pronunciation selected by the software is selected based on the pronunciation of the particular user as determined during a speech recognition process. Claim 8 is very similar to claim 6 except depending from claim 7. None of this is taught in Blackmer, which does not disclose how the software selects a pronunciation.

Claim 9 pertains to the feature discussed on page 8, line 15-18 of the specification of allowing the user to alter the syllable breakdown of a word from the default breakdown provided by the computer. The Office asserted that this is taught in column 22, lines 20-25 of Blackmer. However, that portion of the specification merely notes that the plurality of words shown in the GUI represented by Fig. 9C have "a like number of syllables, and, furthermore, the same syllable in each of the words is stressed". This is utterly irrelevant to what is claimed in claim 9.

Claim 10 recites "allowing the user to identify a part of the character string to associate with an accent, and wherein the step of storing said first pronunciation data comprises storing data representing the identified accent". Claim 10 recites the feature disclosed on page 8, line 19 through page 9, line 6 of the specification wherein the user can change the syllabic accentuation in the word as desired. The Office asserted that this is disclosed in Blackmer in column 22, lines 18-31 (the same portion referred to in connection with claim 9 discussed immediately above). However, as noted above in connection with claim 9, this portion of Blackmer has nothing to do with teaching the computer how to pronounce the word, but instead relates to the computer teaching the user how to pronounce the word.

Claims 16, 17, 18, 19, 20 and 21 depend directly or indirectly from claim 15 and contain limitations similar to those discussed above in connection with dependent claims 2, 3, 4, 5, 6, and 7, respectively. Hence, claims 16, 17, 18, 19, 20 and 21 further distinguish over the prior art for the reasons discussed with respect to claims 2, 3, 4, 5, 6, and 7.

Conclusion

In view of the foregoing amendments and remarks, this application is now in condition for allowance. Applicant respectfully requests the Office to issue a Notice of Allowance at the earliest possible date. The Examiner is invited to contact Applicant's undersigned counsel by telephone call in order to further the prosecution of this case in any way.

Respectfully submitted,

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